Department of Energy
Ohio Field Office
Fernald Area Office
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(513) 648-3155

3893

03 OCT 2001

Knollman Farm, Inc.
7218 Willey Road
Hamilton, Ohio 45013

DOE-0003-02

Dear Messrs. Knollman:

GROUNDWATER MONITORING WELL RESULTS FOR 2000

As you are aware, the United States Department of Energy (DOE) has installed 20 groundwater monitoring wells on your property to collect water samples for analysis. DOE samples these wells in addition to three of the four Knollman Farm wells, to track the progress of the site's groundwater restoration. Figure 1 shows the location of these wells.

This letter presents the results of the samples collected in 2000 for 18 of the 24 wells on your property. There is no analytical data from Monitoring Wells 2092, 3092, and 4091 as they were last sampled in 1993 and none from 2091, 3091, and 4015 as they were last sampled in 1996, 1997, and 1995, respectively. Analytical results through 1999 have been previously provided to you.

We appreciate your participation in this important program and the water quality results will continue to be reported to you. Also, the water quality monitoring results can be found in integrated environmental monitoring quarterly summaries and annual integrated site environmental reports (issued in June of each year), which are available at the Fernald Environmental Management Project (FEMP) Public Environmental Information Center.

Methodology
FEMP personnel have sampled these monitoring wells per the United States Environmental Protection Agency (USEPA) and Ohio Environmental Protection Agency (OEPA) requirements. Data from samples collected from the monitoring wells are used to determine the quality of the groundwater in the area surrounding the Fernald facility.

Results and Discussion
Total uranium is considered the primary constituent of concern at the FEMP. Table 1 summarizes the monitoring results from the 18 wells for total uranium and compares them to the total uranium groundwater Final Remediation Level (FRL). As in the past, the 2000 total uranium results from Wells 13, 2060 (12), 2095, 2550, 3095, 32308 and 32309 have exceeded the FRL. Also, the total uranium results for 2000 from Monitoring Wells 6880 and 6881 have exceeded the FRL. These two wells were installed in 1999 and

sampling did not begin until 2000. However, there was no total uranium FRL exceedance at Monitoring Well 3550 as there was in the past. The only other FRL exceedances were for chromium at Monitoring Well 2093. It is expected that FRL exceedances may continue to occur until final remediation of the groundwater is attained.

Attachment A is a Fact Sheet that provides explanations of the terms used in this transmittal. When reviewing the monitoring results for each sampling period, please keep in mind that FEMP personnel sample monitoring wells for specific projects. As the FEMP continues its groundwater remediation efforts, the requirements for each project change; therefore, constituents analyzed by the laboratory may also change. Consequently, the constituents analyzed may vary from one sampling event to the next depending on what data are needed in order to fulfill reporting requirements. The wells on your property were sampled for a range of constituents. The FEMP has conducted independent analyses for these constituents to investigate the possible presence of these constituents in elevated concentrations in regional groundwater attributable to historical FEMP processing operations. The FEMP has committed to remediate the groundwater in the affected portion of the Great Miami Aquifer and is currently engaged in active restoration. The concentrations to which the FEMP will clean up are called FRLs, and are defined in the Record of Decision for Remedial Actions at Operable Unit 5. Attachment A contains more information on FRLs.

Attachment B presents the monitoring results from these wells and the associated FEMP groundwater FRLs. Those instances where the FRL was exceeded are shown in Attachment B using **bold** typeface. Also, if there was more than one sample result per day (e.g., a duplicate sample), then only the maximum sample concentration is reported and compared to its FRL so as to provide you with the most conservative result.

Additional information concerning the FEMP restoration plan and documents referred to above are available at the FEMP Public Environmental Information Center located in the Delta Building at 10995 Hamilton-Cleves Highway, Harrison, OH; phone: (513) 648-7480.

DOE is committed to making the environmental restoration of the Fernald site effective and successful. Your cooperation in this effort is greatly appreciated.

If you have any questions regarding your monitoring results, then please contact Kathleen Nickel at (513) 648-3166.

Sincerely,

Johnny Reising

Johnny W. Reising
Associate Director
Remediation Management

FEMP:Nickel

Enclosures: As Stated

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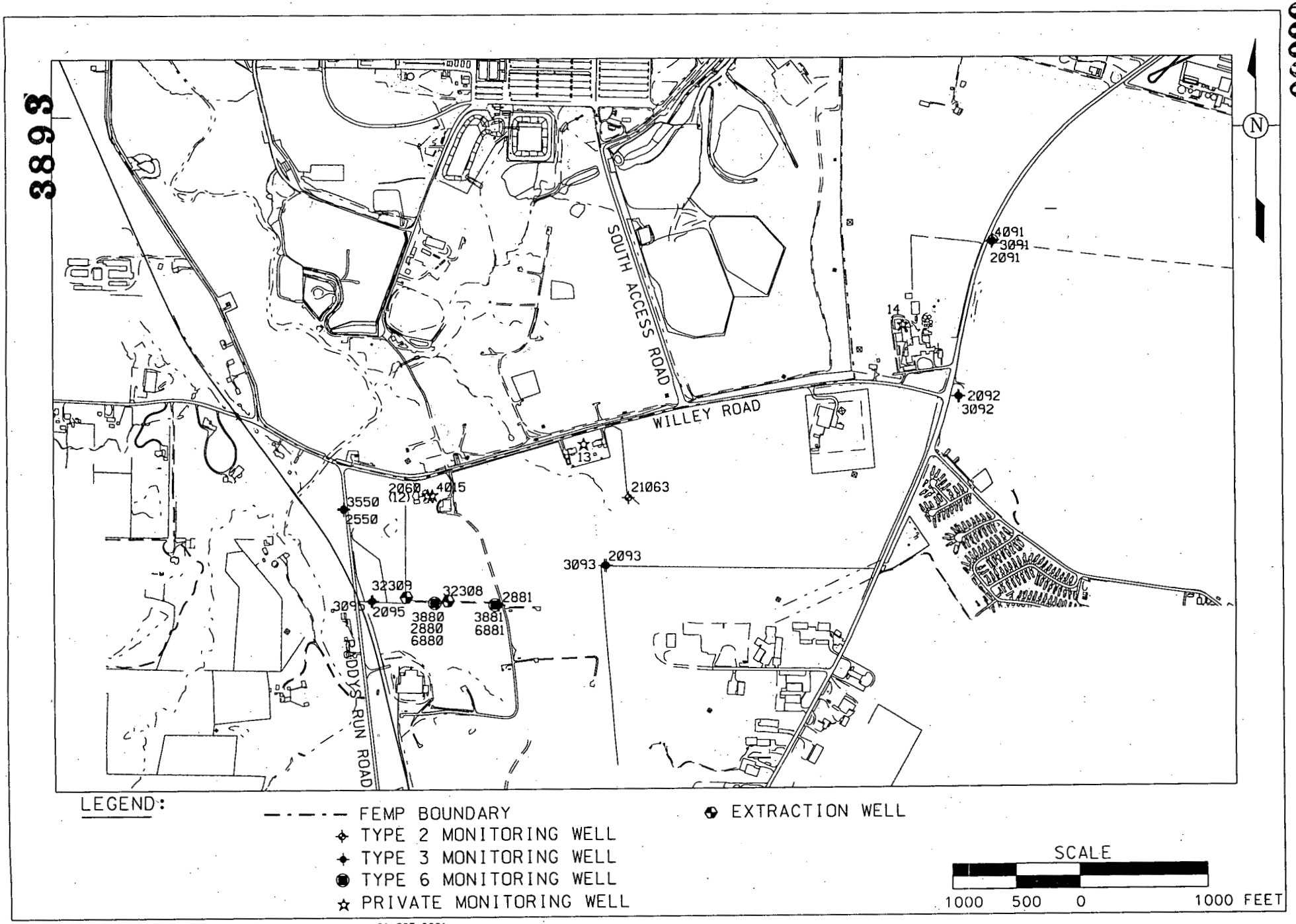

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STATE PLANAR COORDINATE SYSTEM 1983

01-OCT-2001

FIGURE 1. WELL LOCATIONS ON KNOLLMAN FARM, INC.

TABLE 1

2000 MONITORING WELL SUMMARY RESULTS FOR TOTAL URANIUM

Monitoring Well	FRL	Ranges for this Well
13	20 µg/L	**21 to 28 µg/L**
14	20 µg/L	2.4 to 3.1 µg/L
2060 (12)	20 µg/L	**101 to 126 µg/L**
2093	20 µg/L	1.3 to 1.773 µg/L
2095	20 µg/L	**93.418 to 110 µg/L**
21063	20 µg/L	0.959 to 1.1 µg/L
2550	20 µg/L	**61.887 to 78 µg/L**
2880	20 µg/L	11.946 µg/L
2881	20 µg/L	6.539 µg/L
3093	20 µg/L	0.4 to 0.511 µg/L
3095	20 µg/L	**25.39 to 37.296 µg/L**
32308	20 µg/L	**52 to 74 µg/L**
32309	20 µg/L	**64 to 75 µg/L**
3550	20 µg/L	3.4 to 4.452 µg/L
3880	20 µg/L	0.214 µg/L
3881	20 µg/L	ND[a]
6880	20 µg/L	**110.275 to 141 µg/L**
6881	20 µg/L	**30.459 to 35 µg/L**

[a]ND = non-detectable concentrations; the lowest concentration that can be reliably detected is known as the detection limit. Non-detectable concentrations are between zero and the detection limit.

ATTACHMENT A

FACT SHEET

This attachment provides explanations for the terms used in this information packet. Please refer to the cover letter for additional information.

Monitoring Results

The monitoring well results report the name of the constituent analyzed, the concentration measured, and the unit of concentration. Some FEMP projects require a determination of the dissolved (filtered) constituent concentration, as well as the total (unfiltered) concentration. Filtering a groundwater sample results in the removal of suspended soil particles that are greater than 0.45 micrometers in diameter. This diameter is approximately equivalent to 1/200 of the thickness of this page.

Units

The monitoring well results are reported in standard concentration or radioactivity units. These are:

μg/L (micrograms per liter) A unit of measure of the concentration of a substance. This unit is approximately equivalent to parts per billion (ppb). As an illustration, 1 μg/L (ppb) is roughly one drop of gasoline in a railroad box car full of water.

mg/L (milligrams per liter) A unit of measure of the concentration of a substance. This unit is approximately equivalent to parts per million (ppm). As an illustration, 1 mg/L (ppm) is roughly one drop of gasoline in the gas tank of a full-size automobile.

pCi/L (picocuries per liter) A unit of measure of the radioactivity of a substance. Radioactivity is the process in which the nucleus of an unstable atom spontaneously decays or disintegrates. Radiation is the energy that is released when the disintegration or decay occurs. For comparison, 20 μg/L equals 13.5 pCi/L and one picoCurie is one disintegration every 27 seconds.

Final Remediation Levels

The Operable Unit 5 Record of Decision established FRLs for FEMP-related contaminants in environmental media (i.e., soil, surface water, sediment, and groundwater). These FRLs are legally binding cleanup levels that will be used to track and certify the completion of the FEMP's remediation process. FRLs were specifically developed for the Great Miami Aquifer for those constituents that are presently in the Great Miami Aquifer and those that have the potential (based on modeling) to reach the aquifer within 1,000 years at levels that pose an unacceptable risk to human health and/or the environment.

ATTACHMENT B

TABLE B-1
MONITORING WELL DATA

Monitoring Well	Constituent	Sample Date	Result[a,b]	FRL
13	Uranium, Total	1/26/00	**28 µg/L**	20 µg/L
	Uranium, Total	4/27/00	**22 µg/L**	20 µg/L
	Uranium, Total	8/2/00	**21 µg/L**	20 µg/L
	Uranium, Total	10/25/00	**21 µg/L**	20 µg/L
14	Uranium, Total	1/26/00	2.9 µg/L	20 µg/L
	Uranium, Total	4/27/00	3.1 µg/L	20 µg/L
	Uranium, Total	8/2/00	2.5 µg/L	20 µg/L
	Uranium, Total	10/25/00	2.4 µg/L	20 µg/L
2060 (12)	Uranium, Total	4/27/00	**126 µg/L**	20 µg/L
	Uranium, Total	8/2/00	**101 µg/L**	20 µg/L
	Uranium, Total	10/25/00	**101 µg/L**	20 µg/L
2093	1,1-Dichloroethene (unfiltered)	8/9/00	ND	7.0 µg/L
	1,2-Dichloroethane (unfiltered)	2/8/00	ND	5.0 µg/L
	1,2-Dichloroethane (unfiltered)	5/1/00	ND	5.0 µg/L
	1,2-Dichloroethane (unfiltered)	8/9/00	ND	5.0 µg/L
	1,2-Dichloroethane (unfiltered)	11/1/00	ND	5.0 µg/L
	alpha-Chlordane (unfiltered)	8/9/00	ND	2.0 µg/L
	Antimony (unfiltered)	8/9/00	ND	0.0060 mg/L
	Arsenic (unfiltered)	8/9/00	ND	0.050 mg/L
	Barium (unfiltered)	8/9/00	0.049 mg/L	2.0 mg/L
	Beryllium (unfiltered)	8/9/00	ND	0.0040 mg/L
	Boron (unfiltered)	2/8/00	0.156 mg/L	0.33 mg/L
	Boron (unfiltered)	5/1/00	0.119 mg/L	0.33 mg/L
	Boron (unfiltered)	8/9/00	ND	0.33 mg/L
	Boron (unfiltered)	11/1/00	ND	0.33 mg/L
	Bromodichloromethane (unfiltered)	8/9/00	ND	100 µg/L
	Cadmium (unfiltered)	8/9/00	0.00033 mg/L	0.014 mg/L
	Carbon disulfide (unfiltered)	8/9/00	ND	5.5 µg/L

TABLE B-1
(Continued)

Monitoring Well	Constituent	Sample Date	Result[a,b]	FRL
2093 (Cont'd.)	Chromium (unfiltered)[c]	2/8/00	**0.0345 mg/L**	0.022 mg/L
	Chromium (unfiltered)[c]	5/1/00	**1.28 mg/L**	0.022 mg/L
	Chromium (unfiltered)[c]	8/9/00	0.0028 mg/L	0.022 mg/L
	Chromium (unfiltered)[c]	11/1/00	**0.471 mg/L**	0.022 mg/L
	Cobalt (unfiltered)	8/9/00	0.00049 mg/L	0.17 mg/L
	Fluoride (unfiltered)[d]	8/9/00	ND	4 mg/L
	Lead (unfiltered)[d]	8/9/00	ND	0.015 mg/L
	Manganese (unfiltered)	8/9/00	0.0067 mg/L	0.900 mg/L
	Mercury (unfiltered)	2/8/00	ND	0.0020 mg/L
	Mercury (unfiltered)	5/1/00	ND	0.0020 mg/L
	Mercury (unfiltered)	8/9/00	ND	0.0020 mg/L
	Mercury (unfiltered)	11/1/00	ND	0.0020 mg/L
	Neptunium-237 (unfiltered)	2/8/00	ND	1.0 pCi/L
	Neptunium-237 (unfiltered)	5/1/00	ND	1.0 pCi/L
	Neptunium-237 (unfiltered)	8/9/00	ND	1.0 pCi/L
	Neptunium-237 (unfiltered)	11/1/00	ND	1.0 pCi/L
	Nickel (unfiltered)	8/9/00	0.0024 mg/L	0.10 mg/L
	Nitrate/Nitrite (unfiltered)[e]	2/8/00	0.58 mg/L	11 mg/L
	Nitrate/Nitrite (unfiltered)[e]	5/1/00	0.696 mg/L	11 mg/L
	Nitrate/Nitrite (unfiltered)[e]	8/9/00	0.248 mg/L	11 mg/L
	Nitrate/Nitrite (unfiltered)[e]	11/1/00	0.368 mg/L	11 mg/L
	Radium-226 (unfiltered)	8/9/00	ND	20 pCi/L
	Selenium (unfiltered)	8/9/00	ND	0.050 mg/L
	Silver (unfiltered)	8/9/00	ND	0.050 mg/L
	Strontium-90 (unfiltered)	2/8/00	ND	8.0 pCi/L
	Strontium-90 (unfiltered)	5/1/00	ND	8.0 pCi/L
	Strontium-90 (unfiltered)	8/9/00	ND	8.0 pCi/L
	Strontium-90 (unfiltered)	11/1/00	ND	8.0 pCi/L
	Technetium-99 (unfiltered)	8/9/00	ND	94 pCi/L
	Thorium-228 (unfiltered)	8/9/00	ND	4.0 pCi/L
	Thorium-232 (unfiltered)	8/9/00	ND	1.2 pCi/L

TABLE B-1
(Continued)

Monitoring Well	Constituent	Sample Date	Result[a,b]	FRL
2093 (Contd.)	Trichloroethene (unfiltered)	8/9/00	ND	5.0 µg/L
	Uranium, Total (unfiltered)	2/8/00	1.3 µg/L	20 µg/L
	Uranium, Total (unfiltered)	5/1/00	1.713 µg/L	20 µg/L
	Uranium, Total (unfiltered)	8/9/00	1.348 µg/L	20 µg/L
	Uranium, Total (unfiltered)	11/1/00	1.773 µg/L	20 µg/L
	Vanadium (unfiltered)	8/9/00	ND	0.038 mg/L
	Vinyl chloride (unfiltered)	8/9/00	ND	2.0 µg/L
	Zinc (unfiltered)	8/9/00	ND	0.021 mg/L
2095	1,1-Dichloroethene (unfiltered)	8/14/00	ND	7.0 µg/L
	1,2-Dichloroethane (unfiltered)	2/7/00	ND	5.0 µg/L
	1,2-Dichloroethane (unfiltered)	5/2/00	ND	5.0 µg/L
	1,2-Dichloroethane (unfiltered)	8/14/00	ND	5.0 µg/L
	1,2-Dichloroethane (unfiltered)	10/31/00	ND	5.0 µg/L
	alpha-Chlordane (unfiltered)	8/14/00	ND	2.0 µg/L
	Antimony (unfiltered)	8/14/00	ND	0.0060 mg/L
	Arsenic (unfiltered)	8/14/00	ND	0.050 mg/L
	Barium (unfiltered)	8/14/00	0.0466 mg/L	2.0 mg/L
	Beryllium (unfiltered)	8/14/00	ND	0.0040 mg/L
	Boron (unfiltered)	2/7/00	0.0513 mg/L	0.33 mg/L
	Boron (unfiltered)	5/2/00	0.0377 mg/L	0.33 mg/L
	Boron (unfiltered)	8/14/00	ND	0.33 mg/L
	Boron (unfiltered)	10/31/00	ND	0.33 mg/L
	Bromodichloromethane (unfiltered)	8/14/00	ND	100 µg/L
	Cadmium (unfiltered)	8/14/00	ND	0.014 mg/L
	Carbon disulfide (unfiltered)	8/14/00	ND	5.5 µg/L
	Chromium (unfiltered)[c]	2/7/00	ND	0.022 mg/L
	Chromium (unfiltered)[c]	5/2/00	ND	0.022 mg/L
	Chromium (unfiltered)[c]	8/14/00	ND	0.022 mg/L
	Chromium (unfiltered)[c]	10/31/00	ND	0.022 mg/L
	Cobalt (unfiltered)	8/14/00	ND	0.17 mg/L
	Fluoride (unfiltered)[d]	8/14/00	0.28 mg/L	4 mg/L

TABLE B-1
(Continued)

Monitoring Well	Constituent	Sample Date	Result[a,b]	FRL
2095 (Cont'd.)	Lead (unfiltered)[d]	8/14/00	ND	0.015 mg/L
	Manganese (unfiltered)	8/14/00	ND	0.900 mg/L
	Mercury (unfiltered)	2/7/00	ND	0.0020 mg/L
	Mercury (unfiltered)	5/2/00	ND	0.0020 mg/L
	Mercury (unfiltered)	8/14/00	0.00027 mg/L	0.0020 mg/L
	Mercury (unfiltered)	10/31/00	ND	0.0020 mg/L
	Neptunium-237 (unfiltered)	2/7/00	ND	1.0 pCi/L
	Neptunium-237 (unfiltered)	5/2/00	ND	1.0 pCi/L
	Neptunium-237 (unfiltered)	8/14/00	ND	1.0 pCi/L
	Neptunium-237 (unfiltered)	10/31/00	ND	1.0 pCi/L
	Nickel (unfiltered)	8/14/00	ND	0.10 mg/L
	Nitrate/Nitrite (unfiltered)[e]	2/7/00	1.43 mg/L	11 mg/L
	Nitrate/Nitrite (unfiltered)[e]	5/2/00	3.28 mg/L	11 mg/L
	Nitrate/Nitrite (unfiltered)[e]	8/14/00	5.46 mg/L	11 mg/L
	Nitrate/Nitrite (unfiltered)[e]	10/31/00	3.21 mg/L	11 mg/L
	Radium-226 (unfiltered)	8/14/00	1.075 pCi/L	20 pCi/L
	Selenium (unfiltered)	8/14/00	ND	0.050 mg/L
	Silver (unfiltered)	8/14/00	ND	0.050 mg/L
	Strontium-90 (unfiltered)	2/7/00	ND	8.0 pCi/L
	Strontium-90 (unfiltered)	5/2/00	0.4 pCi/L	8.0 pCi/L
	Strontium-90 (unfiltered)	8/14/00	1.066 pCi/L	8.0 pCi/L
	Strontium-90 (unfiltered)	10/31/00	ND	8.0 pCi/L
	Technetium-99 (unfiltered)	8/14/00	ND	94 pCi/L
	Thorium-228 (unfiltered)	8/14/00	ND	4.0 pCi/L
	Thorium-232 (unfiltered)	8/14/00	ND	1.2 pCi/L
	Trichloroethene (unfiltered)	8/14/00	ND	5.0 µg/L
	Uranium, Total (unfiltered)	2/7/00	**110 µg/L**	20 µg/L
	Uranium, Total (unfiltered)	5/2/00	**93.418 µg/L**	20 µg/L
	Uranium, Total (unfiltered)	8/14/00	**99.459 µg/L**	20 µg/L
	Uranium, Total (unfiltered)	10/31/00	**93.707 µg/L**	20 µg/L
	Vanadium (unfiltered)	8/14/00	ND	0.038 mg/L

TABLE B-1
(Continued)

Monitoring Well	Constituent	Sample Date	Result[a,b]	FRL
2095 (Cont'd.)	Vinyl chloride (unfiltered)	8/14/00	ND	2.0 µg/L
	Zinc (unfiltered)	8/14/00	ND	0.021 mg/L
21063	1,1-Dichloroethene (unfiltered)	8/9/00	ND	7.0 µg/L
	1,2-Dichloroethane (unfiltered)	2/8/00	ND	5.0 µg/L
	1,2-Dichloroethane (unfiltered)	5/1/00	ND	5.0 µg/L
	1,2-Dichloroethane (unfiltered)	8/9/00	ND	5.0 µg/L
	1,2-Dichloroethane (unfiltered)	10/31/00	ND	5.0 µg/L
	alpha-Chlordane (unfiltered)	8/9/00	ND	2.0 µg/L
	Antimony (unfiltered)	8/9/00	ND	0.0060 mg/L
	Arsenic (unfiltered)	8/9/00	ND	0.050 mg/L
	Barium (unfiltered)	8/9/00	0.0562 mg/L	2.0 mg/L
	Beryllium (unfiltered)	8/9/00	ND	0.0040 mg/L
	Boron (unfiltered)	2/8/00	0.245 mg/L	0.33 mg/L
	Boron (unfiltered)	5/1/00	0.164 mg/L	0.33 mg/L
	Boron (unfiltered)	8/9/00	0.139 mg/L	0.33 mg/L
	Boron (unfiltered)	10/31/00	ND	0.33 mg/L
	Bromodichloromethane (unfiltered)	8/9/00	ND	100 µg/L
	Cadmium (unfiltered)	8/9/00	0.00031 mg/L	0.014 mg/L
	Carbon disulfide (unfiltered)	8/9/00	ND	5.5 µg/L
	Chromium (unfiltered)[c]	2/8/00	ND	0.022 mg/L
	Chromium (unfiltered)[c]	5/1/00	ND	0.022 mg/L
	Chromium (unfiltered)[c]	8/9/00	0.00026 mg/L	0.022 mg/L
	Chromium (unfiltered)[c]	10/31/00	ND	0.022 mg/L
	Cobalt (unfiltered)	8/9/00	0.00032 mg/L	0.17 mg/L
	Fluoride (unfiltered)[d]	8/9/00	ND	4 mg/L
	Lead (unfiltered)[d]	8/9/00	ND	0.015 mg/L
	Manganese (unfiltered)	8/9/00	0.224 mg/L	0.900 mg/L
	Mercury (unfiltered)	2/8/00	ND	0.0020 mg/L
	Mercury (unfiltered)	5/1/00	ND	0.0020 mg/L
	Mercury (unfiltered)	8/9/00	ND	0.0020 mg/L
	Mercury (unfiltered)	10/31/00	ND	0.0020 mg/L

TABLE B-1
(Continued)

Monitoring Well	Constituent	Sample Date	Result[a,b]	FRL
21063 (Cont'd.)	Neptunium-237 (unfiltered)	2/8/00	ND	1.0 pCi/L
	Neptunium-237 (unfiltered)	5/1/00	ND	1.0 pCi/L
	Neptunium-237 (unfiltered)	8/9/00	ND	1.0 pCi/L
	Neptunium-237 (unfiltered)	10/31/00	ND	1.0 pCi/L
	Nickel (unfiltered)	8/9/00	ND	0.10 mg/L
	Nitrate/Nitrite (unfiltered)[c]	2/8/00	ND	11 mg/L
	Nitrate/Nitrite (unfiltered)[c]	5/1/00	ND	11 mg/L
	Nitrate/Nitrite (unfiltered)[c]	8/9/00	0.162 mg/L	11 mg/L
	Nitrate/Nitrite (unfiltered)[c]	10/31/00	ND	11 mg/L
	Radium-226 (unfiltered)	8/9/00	1.347 pCi/L	20 pCi/L
	Selenium (unfiltered)	8/9/00	ND	0.050 mg/L
	Silver (unfiltered)	8/9/00	ND	0.050 mg/L
	Strontium-90 (unfiltered)	2/8/00	ND	8.0 pCi/L
	Strontium-90 (unfiltered)	5/1/00	ND	8.0 pCi/L
	Strontium-90 (unfiltered)	8/9/00	ND	8.0 pCi/L
	Strontium-90 (unfiltered)	10/31/00	ND	8.0 pCi/L
	Technetium-99 (unfiltered)	8/9/00	ND	94 pCi/L
	Thorium-228 (unfiltered)	8/9/00	ND	4.0 pCi/L
	Thorium-232 (unfiltered)	8/9/00	ND	1.2 pCi/L
	Trichloroethene (unfiltered)	8/9/00	ND	5.0 µg/L
	Uranium, Total (unfiltered)	2/8/00	1.1 µg/L	20 µg/L
	Uranium, Total (unfiltered)	5/1/00	1.092 µg/L	20 µg/L
	Uranium, Total (unfiltered)	8/9/00	0.959 µg/L	20 µg/L
	Uranium, Total (unfiltered)	10/31/00	1.055 µg/L	20 µg/L
	Vanadium (unfiltered)	8/9/00	ND	0.038 mg/L
	Vinyl chloride (unfiltered)	8/9/00	ND	2.0 µg/L
	Zinc (unfiltered)	8/9/00	ND	0.021 mg/L
2550	Uranium, Total (unfiltered)	2/9/00	78 µg/L	20 µg/L
	Uranium, Total (unfiltered)	5/9/00	61.887 µg/L	20 µg/L
	Uranium, Total (unfiltered)	8/8/00	64.225 µg/L	20 µg/L
	Uranium, Total (unfiltered)	11/2/00	65.328 µg/L	20 µg/L

TABLE B-1
(Continued)

Monitoring Well	Constituent	Sample Date	Result[a,b]	FRL
2880	Uranium, Total (unfiltered)	8/3/00	11.946 µg/L	20 µg/L
2881	Uranium, Total (unfiltered)	8/8/00	6.539 µg/L	20 µg/L
3093	1,1-Dichloroethene (unfiltered)	8/9/00	ND	7.0 µg/L
	1,2-Dichloroethane (unfiltered)	2/8/00	ND	5.0 µg/L
	1,2-Dichloroethane (unfiltered)	5/1/00	ND	5.0 µg/L
	1,2-Dichloroethane (unfiltered)	8/9/00	ND	5.0 µg/L
	1,2-Dichloroethane (unfiltered)	10/31/00	ND	5.0 µg/L
	alpha-Chlordane (unfiltered)	8/9/00	ND	2.0 µg/L
	Antimony (unfiltered)	8/9/00	ND	0.0060 mg/L
	Arsenic (unfiltered)	8/9/00	0.001 mg/L	0.050 mg/L
	Barium (unfiltered)	8/9/00	0.0613 mg/L	2.0 mg/L
	Beryllium (unfiltered)	8/9/00	ND	0.0040 mg/L
	Boron (unfiltered)	2/8/00	0.0338 mg/L	0.33 mg/L
	Boron (unfiltered)	5/1/00	0.0253 mg/L	0.33 mg/L
	Boron (unfiltered)	8/9/00	ND	0.33 mg/L
	Boron (unfiltered)	10/31/00	ND	0.33 mg/L
	Bromodichloromethane (unfiltered)	8/9/00	ND	100 µg/L
	Cadmium (unfiltered)	8/9/00	ND	0.014 mg/L
	Carbon disulfide (unfiltered)	8/9/00	ND	5.5 µg/L
	Chromium (unfiltered)[c]	2/8/00	ND	0.022 mg/L
	Chromium (unfiltered)[c]	5/1/00	0.0014 mg/L	0.022 mg/L
	Chromium (unfiltered)[c]	8/9/00	0.00057 mg/L	0.022 mg/L
	Chromium (unfiltered)[c]	10/31/00	ND	0.022 mg/L
	Cobalt (unfiltered)	8/9/00	0.00059 mg/L	0.17 mg/L
	Fluoride (unfiltered)[d]	8/9/00	ND	4 mg/L
	Lead (unfiltered)[d]	8/9/00	ND	0.015 mg/L
	Manganese (unfiltered)	8/9/00	0.261 mg/L	0.900 mg/L
	Mercury (unfiltered)	2/8/00	ND	0.0020 mg/L
	Mercury (unfiltered)	5/1/00	ND	0.0020 mg/L
	Mercury (unfiltered)	8/9/00	ND	0.0020 mg/L
	Mercury (unfiltered)	10/31/00	ND	0.0020 mg/L

TABLE B-1
(Continued)

Monitoring Well	Constituent	Sample Date	Result[a,b]	FRL
3093 (Cont'd.)	Neptunium-237 (unfiltered)	2/8/00	ND	1.0 pCi/L
	Neptunium-237 (unfiltered)	5/1/00	ND	1.0 pCi/L
	Neptunium-237 (unfiltered)	8/9/00	ND	1.0 pCi/L
	Neptunium-237 (unfiltered)	10/31/00	ND	1.0 pCi/L
	Nickel (unfiltered)	8/9/00	ND	0.10 mg/L
	Nitrate/Nitrite (unfiltered)[e]	2/8/00	ND	11 mg/L
	Nitrate/Nitrite (unfiltered)[e]	5/1/00	1 mg/L	11 mg/L
	Nitrate/Nitrite (unfiltered)[e]	8/9/00	0.448 mg/L	11 mg/L
	Nitrate/Nitrite (unfiltered)[e]	10/31/00	ND	11 mg/L
	Radium-226 (unfiltered)	8/9/00	ND	20 pCi/L
	Selenium (unfiltered)	8/9/00	ND	0.050 mg/L
	Silver (unfiltered)	8/9/00	ND	0.050 mg/L
	Strontium-90 (unfiltered)	2/8/00	ND	8.0 pCi/L
	Strontium-90 (unfiltered)	5/1/00	ND	8.0 pCi/L
	Strontium-90 (unfiltered)	8/9/00	ND	8.0 pCi/L
	Strontium-90 (unfiltered)	10/31/00	ND	8.0 pCi/L
	Technetium-99 (unfiltered)	8/9/00	ND	94 pCi/L
	Thorium-228 (unfiltered)	8/9/00	ND	4.0 pCi/L
	Thorium-232 (unfiltered)	8/9/00	ND	1.2 pCi/L
	Trichloroethene (unfiltered)	8/9/00	ND	5.0 µg/L
	Uranium, Total (unfiltered)	2/8/00	0.4 µg/L	20 µg/L
	Uranium, Total (unfiltered)	5/1/00	0.405 µg/L	20 µg/L
	Uranium, Total (unfiltered)	8/9/00	0.489 µg/L	20 µg/L
	Uranium, Total (unfiltered)	10/31/00	0.511 µg/L	20 µg/L
	Vanadium (unfiltered)	8/9/00	ND	0.038 mg/L
	Vinyl chloride (unfiltered)	8/9/00	ND	2.0 µg/L
	Zinc (unfiltered)	8/9/00	ND	0.021 mg/L
3095	1,1-Dichloroethene (unfiltered)	8/14/00	ND	7.0 µg/L
	1,2-Dichloroethane (unfiltered)	2/7/00	ND	5.0 µg/L
	1,2-Dichloroethane (unfiltered)	5/2/00	ND	5.0 µg/L
	1,2-Dichloroethane (unfiltered)	8/14/00	ND	5.0 µg/L

TABLE B-1
(Continued)

Monitoring Well	Constituent	Sample Date	Result[a,b]	FRL
3095 (Cont'd.)	1,2-Dichloroethane (unfiltered)	10/31/00	ND	5.0 µg/L
	alpha-Chlordane (unfiltered)	8/14/00	ND	2.0 µg/L
	Antimony (unfiltered)	8/14/00	ND	0.0060 mg/L
	Arsenic (unfiltered)	8/14/00	0.0013 mg/L	0.050 mg/L
	Barium (unfiltered)	8/14/00	0.0694 mg/L	2.0 mg/L
	Beryllium (unfiltered)	8/14/00	ND	0.0040 mg/L
	Boron (unfiltered)	2/7/00	0.03 mg/L	0.33 mg/L
	Boron (unfiltered)	5/2/00	0.028 mg/L	0.33 mg/L
	Boron (unfiltered)	8/14/00	0.0723 mg/L	0.33 mg/L
	Boron (unfiltered)	10/31/00	ND	0.33 mg/L
	Bromodichloromethane (unfiltered)	8/14/00	ND	100 µg/L
	Cadmium (unfiltered)	8/14/00	ND	0.014 mg/L
	Carbon disulfide (unfiltered)	8/14/00	ND	5.5 µg/L
	Chromium (unfiltered)[c]	2/7/00	ND	0.022 mg/L
	Chromium (unfiltered)[c]	5/2/00	ND	0.022 mg/L
	Chromium (unfiltered)[c]	8/14/00	ND	0.022 mg/L
	Chromium (unfiltered)[c]	10/31/00	ND	0.022 mg/L
	Cobalt (unfiltered)	8/14/00	ND	0.17 mg/L
	Fluoride (unfiltered)[d]	8/14/00	ND	4 mg/L
	Lead (unfiltered)[d]	8/14/00	ND	0.015 mg/L
	Manganese (unfiltered)	8/14/00	0.267 mg/L	0.900 mg/L
	Mercury (unfiltered)	2/7/00	ND	0.0020 mg/L
	Mercury (unfiltered)	5/2/00	ND	0.0020 mg/L
	Mercury (unfiltered)	8/14/00	ND	0.0020 mg/L
	Mercury (unfiltered)	10/31/00	ND	0.0020 mg/L
	Neptunium-237 (unfiltered)	2/7/00	ND	1.0 pCi/L
	Neptunium-237 (unfiltered)	5/2/00	ND	1.0 pCi/L
	Neptunium-237 (unfiltered)	8/14/00	ND	1.0 pCi/L
	Neptunium-237 (unfiltered)	10/31/00	ND	1.0 pCi/L
	Nickel (unfiltered)	8/14/00	ND	0.10 mg/L
	Nitrate/Nitrite (unfiltered)[e]	2/7/00	0.15 mg/L	11 mg/L

TABLE B-1
(Continued)

Monitoring Well	Constituent	Sample Date	Result[a,b]	FRL
3095 (Cont'd.)	Nitrate/Nitrite (unfiltered)[e]	5/2/00	0.062 mg/L	11 mg/L
	Nitrate/Nitrite (unfiltered)[e]	8/14/00	ND	11 mg/L
	Nitrate/Nitrite (unfiltered)[e]	10/31/00	ND	11 mg/L
	Radium-226 (unfiltered)	8/14/00	ND	20 pCi/L
	Selenium (unfiltered)	8/14/00	ND	0.050 mg/L
	Silver (unfiltered)	8/14/00	ND	0.050 mg/L
	Strontium-90 (unfiltered)	2/7/00	ND	8.0 pCi/L
	Strontium-90 (unfiltered)	5/2/00	ND	8.0 pCi/L
	Strontium-90 (unfiltered)	8/14/00	ND	8.0 pCi/L
	Strontium-90 (unfiltered)	10/31/00	ND	8.0 pCi/L
	Technetium-99 (unfiltered)	8/14/00	ND	94 pCi/L
	Thorium-228 (unfiltered)	8/14/00	ND	4.0 pCi/L
	Thorium-232 (unfiltered)	8/14/00	ND	1.2 pCi/L
	Trichloroethene (unfiltered)	8/14/00	ND	5.0 µg/L
	Uranium, Total (unfiltered)	2/7/00	**29 µg/L**	20 µg/L
	Uranium, Total (unfiltered)	5/2/00	**37.296 µg/L**	20 µg/L
	Uranium, Total (unfiltered)	8/14/00	**25.39 µg/L**	20 µg/L
	Uranium, Total (unfiltered)	10/31/00	**30.688 µg/L**	20 µg/L
	Vanadium (unfiltered)	8/14/00	ND	0.038 mg/L
	Vinyl chloride (unfiltered)	8/14/00	ND	2.0 µg/L
	Zinc (unfiltered)	8/14/00	ND	0.021 mg/L
32308	Uranium, Total (unfiltered)	1/24/00	**74 µg/L**	20 µg/L
	Uranium, Total (unfiltered)	2/28/00	**73 µg/L**	20 µg/L
	Uranium, Total (unfiltered)	3/29/00	**72 µg/L**	20 µg/L
	Uranium, Total (unfiltered)	4/26/00	**73 µg/L**	20 µg/L
	Uranium, Total (unfiltered)	6/28/00	**73 µg/L**	20 µg/L
	Uranium, Total (unfiltered)	7/24/00	**52 µg/L**	20 µg/L
	Uranium, Total (unfiltered)	8/28/00	**72 µg/L**	20 µg/L
	Uranium, Total (unfiltered)	10/30/00	**73 µg/L**	20 µg/L
	Uranium, Total (unfiltered)	11/20/00	**68 µg/L**	20 µg/L
	Uranium, Total (unfiltered)	12/28/00	**71 µg/L**	20 µg/L

TABLE B-1
(Continued)

Monitoring Well	Constituent	Sample Date	Result[a,b]	FRL
32309	Uranium, Total (unfiltered)	1/24/00	**75 µg/L**	20 µg/L
	Uranium, Total (unfiltered)	2/28/00	**70 µg/L**	20 µg/L
	Uranium, Total (unfiltered)	3/29/00	**65 µg/L**	20 µg/L
	Uranium, Total (unfiltered)	4/26/00	**64 µg/L**	20 µg/L
	Uranium, Total (unfiltered)	6/28/00	**68 µg/L**	20 µg/L
	Uranium, Total (unfiltered)	7/24/00	**68 µg/L**	20 µg/L
	Uranium, Total (unfiltered)	8/28/00	**69 µg/L**	20 µg/L
	Uranium, Total (unfiltered)	10/30/00	**73 µg/L**	20 µg/L
	Uranium, Total (unfiltered)	11/20/00	**66 µg/L**	20 µg/L
	Uranium, Total (unfiltered)	12/28/00	**68 µg/L**	20 µg/L
3550	Uranium, Total (unfiltered)	2/2/00	3.4 µg/L	20 µg/L
	Uranium, Total (unfiltered)	5/9/00	3.728 µg/L	20 µg/L
	Uranium, Total (unfiltered)	8/8/00	4.452 µg/L	20 µg/L
	Uranium, Total (unfiltered)	11/2/00	3.63 µg/L	20 µg/L
3880	Uranium, Total (unfiltered)	8/3/00	0.214 µg/L	20 µg/L
3881	Uranium, Total (unfiltered)	8/3/00	ND	20 µg/L
6880	1,1-Dichloroethene (unfiltered)	8/8/00	ND	7.0 µg/L
	1,2-Dichloroethane (unfiltered)	2/7/00	ND	5.0 µg/L
	1,2-Dichloroethane (unfiltered)	5/1/00	ND	5.0 µg/L
	1,2-Dichloroethane (unfiltered)	8/8/00	ND	5.0 µg/L
	1,2-Dichloroethane (unfiltered)	10/31/00	ND	5.0 µg/L
	alpha-Chlordane (unfiltered)	8/8/00	ND	2.0 µg/L
	Antimony (unfiltered)	8/8/00	ND	0.0060 mg/L
	Arsenic (unfiltered)	8/8/00	ND	0.050 mg/L
	Barium (unfiltered)	8/8/00	0.0444 mg/L	2.0 mg/L
	Beryllium (unfiltered)	8/8/00	ND	0.0040 mg/L
	Boron (unfiltered)	2/7/00	0.0455 mg/L	0.33 mg/L
	Boron (unfiltered)	5/1/00	0.0395 mg/L	0.33 mg/L
	Boron (unfiltered)	8/8/00	0.0613 mg/L	0.33 mg/L
	Boron (unfiltered)	10/31/00	ND	0.33 mg/L
	Bromodichloromethane (unfiltered)	8/8/00	ND	100 µg/L

TABLE B-1
(Continued)

Monitoring Well	Constituent	Sample Date	Result[a,b]	FRL
6880 (Cont'd.)	Cadmium (unfiltered)	8/8/00	ND	0.014 mg/L
	Carbon disulfide (unfiltered)	8/8/00	ND	5.5 µg/L
	Chromium (unfiltered)[c]	2/7/00	ND	0.022 mg/L
	Chromium (unfiltered)[c]	5/1/00	ND	0.022 mg/L
	Chromium (unfiltered)[c]	8/8/00	ND	0.022 mg/L
	Chromium (unfiltered)[c]	10/31/00	ND	0.022 mg/L
	Cobalt (unfiltered)	8/8/00	ND	0.17 mg/L
	Fluoride (unfiltered)[d]	8/8/00	0.25 mg/L	4 mg/L
	Lead (unfiltered)[d]	8/8/00	ND	0.015 mg/L
	Manganese (unfiltered)	8/8/00	0.111 mg/L	0.900 mg/L
	Mercury (unfiltered)	2/7/00	ND	0.0020 mg/L
	Mercury (unfiltered)	5/1/00	ND	0.0020 mg/L
	Mercury (unfiltered)	8/8/00	ND	0.0020 mg/L
	Mercury (unfiltered)	10/31/00	ND	0.0020 mg/L
	Neptunium-237 (unfiltered)	2/7/00	ND	1.0 pCi/L
	Neptunium-237 (unfiltered)	5/1/00	ND	1.0 pCi/L
	Neptunium-237 (unfiltered)	8/8/00	ND	1.0 pCi/L
	Neptunium-237 (unfiltered)	10/31/00	ND	1.0 pCi/L
	Nickel (unfiltered)	8/8/00	ND	0.10 mg/L
	Nitrate/Nitrite (unfiltered)[e]	2/7/00	0.62 mg/L	11 mg/L
	Nitrate/Nitrite (unfiltered)[e]	5/1/00	1.81 mg/L	11 mg/L
	Nitrate/Nitrite (unfiltered)[e]	8/8/00	0.877 mg/L	11 mg/L
	Nitrate/Nitrite (unfiltered)[e]	10/31/00	2.3 mg/L	11 mg/L
	Radium-226 (unfiltered)	8/8/00	ND	20 pCi/L
	Selenium (unfiltered)	8/8/00	ND	0.050 mg/L
	Silver (unfiltered)	8/8/00	ND	0.050 mg/L
	Strontium-90 (unfiltered)	2/7/00	ND	8.0 pCi/L
	Strontium-90 (unfiltered)	5/1/00	0.321 pCi/L	8.0 pCi/L
	Strontium-90 (unfiltered)	8/8/00	1.327 pCi/L	8.0 pCi/L
	Strontium-90 (unfiltered)	10/31/00	ND	8.0 pCi/L
	Technetium-99 (unfiltered)	8/8/00	ND	94 pCi/L

TABLE B-1
(Continued)

Monitoring Well	Constituent	Sample Date	Result[a,b]	FRL
6880 (Cont'd.)	Thorium-228 (unfiltered)	8/8/00	ND	4.0 pCi/L
	Thorium-232 (unfiltered)	8/8/00	ND	1.2 pCi/L
	Trichloroethene (unfiltered)	8/8/00	ND	5.0 µg/L
	Uranium, Total (unfiltered)	2/7/00	**141 µg/L**	20 µg/L
	Uranium, Total (unfiltered)	5/1/00	**121.703 µg/L**	20 µg/L
	Uranium, Total (unfiltered)	8/8/00	**110.275 µg/L**	20 µg/L
	Uranium, Total (unfiltered)	10/31/00	**111.218 µg/L**	20 µg/L
	Vanadium (unfiltered)	8/8/00	ND	0.038 mg/L
	Vinyl chloride (unfiltered)	8/8/00	ND	2.0 µg/L
	Zinc (unfiltered)	8/8/00	0.0098 mg/L	0.021 mg/L
6881	1,1-Dichloroethene (unfiltered)	8/8/00	ND	7.0 µg/L
	1,2-Dichloroethane (unfiltered)	2/7/00	ND	5.0 µg/L
	1,2-Dichloroethane (unfiltered)	5/1/00	ND	5.0 µg/L
	1,2-Dichloroethane (unfiltered)	8/8/00	ND	5.0 µg/L
	1,2-Dichloroethane (unfiltered)	10/31/00	ND	5.0 µg/L
	alpha-Chlordane (unfiltered)	8/8/00	ND	2.0 µg/L
	Antimony (unfiltered)	8/8/00	ND	0.0060 mg/L
	Arsenic (unfiltered)	8/8/00	ND	0.050 mg/L
	Barium (unfiltered)	8/8/00	0.0508 mg/L	2.0 mg/L
	Beryllium (unfiltered)	8/8/00	ND	0.0040 mg/L
	Boron (unfiltered)	2/7/00	0.0372 mg/L	0.33 mg/L
	Boron (unfiltered)	5/1/00	0.0381 mg/L	0.33 mg/L
	Boron (unfiltered)	8/8/00	0.0761 mg/L	0.33 mg/L
	Boron (unfiltered)	10/31/00	ND	0.33 mg/L
	Bromodichloromethane (unfiltered)	8/8/00	ND	100 µg/L
	Cadmium (unfiltered)	8/8/00	ND	0.014 mg/L
	Carbon disulfide (unfiltered)	8/8/00	ND	5.5 µg/L
	Chromium (unfiltered)[c]	2/7/00	ND	0.022 mg/L
	Chromium (unfiltered)[c]	5/1/00	ND	0.022 mg/L
	Chromium (unfiltered)[c]	8/8/00	ND	0.022 mg/L
	Chromium (unfiltered)[c]	10/31/00	ND	0.022 mg/L

TABLE B-1
(Continued)

Monitoring Well	Constituent	Sample Date	Result[a,b]	FRL
6881 (Cont'd.)	Cobalt (unfiltered)	8/8/00	0.0011 mg/L	0.17 mg/L
	Fluoride (unfiltered)[d]	8/8/00	ND	4 mg/L
	Lead (unfiltered)[d]	8/8/00	ND	0.015 mg/L
	Manganese (unfiltered)	8/8/00	0.396 mg/L	0.900 mg/L
	Mercury (unfiltered)	2/7/00	ND	0.0020 mg/L
	Mercury (unfiltered)	5/1/00	ND	0.0020 mg/L
	Mercury (unfiltered)	8/8/00	ND	0.0020 mg/L
	Mercury (unfiltered)	10/31/00	ND	0.0020 mg/L
	Neptunium-237 (unfiltered)	2/7/00	ND	1.0 pCi/L
	Neptunium-237 (unfiltered)	5/1/00	ND	1.0 pCi/L
	Neptunium-237 (unfiltered)	8/8/00	ND	1.0 pCi/L
	Neptunium-237 (unfiltered)	10/31/00	ND	1.0 pCi/L
	Nickel (unfiltered)	8/8/00	ND	0.10 mg/L
	Nitrate/Nitrite (unfiltered)[e]	2/7/00	ND	11 mg/L
	Nitrate/Nitrite (unfiltered)[e]	5/1/00	ND	11 mg/L
	Nitrate/Nitrite (unfiltered)[e]	8/8/00	ND	11 mg/L
	Nitrate/Nitrite (unfiltered)[e]	10/31/00	ND	11 mg/L
	Radium-226 (unfiltered)	8/8/00	1.24 pCi/L	20 pCi/L
	Selenium (unfiltered)	8/8/00	ND	0.050 mg/L
	Silver (unfiltered)	8/8/00	ND	0.050 mg/L
	Strontium-90 (unfiltered)	2/7/00	ND	8.0 pCi/L
	Strontium-90 (unfiltered)	5/1/00	ND	8.0 pCi/L
	Strontium-90 (unfiltered)	8/8/00	1.034 pCi/L	8.0 pCi/L
	Strontium-90 (unfiltered)	10/31/00	ND	8.0 pCi/L
	Technetium-99 (unfiltered)	8/8/00	ND	94 pCi/L
	Thorium-228 (unfiltered)	8/8/00	ND	4.0 pCi/L
	Thorium-232 (unfiltered)	8/8/00	ND	1.2 pCi/L
	Trichloroethene (unfiltered)	8/8/00	ND	5.0 µg/L
	Uranium, Total (unfiltered)	2/7/00	**35 µg/L**	20 µg/L
	Uranium, Total (unfiltered)	5/1/00	**30.637 µg/L**	20 µg/L
	Uranium, Total (unfiltered)	8/8/00	**30.889 µg/L**	20 µg/L

TABLE B-1
(Continued)

Monitoring Well	Constituent	Sample Date	Result[a,b]	FRL
6881 (Cont'd.)	Uranium, Total (unfiltered)	10/31/00	**30.459 µg/L**	20 µg/L
	Vanadium (unfiltered)	8/8/00	ND	0.038 mg/L
	Vinyl chloride (unfiltered)	8/8/00	ND	2.0 µg/L
	Zinc (unfiltered)	8/8/00	ND	0.021 mg/L

[a]ND = non-detectable concentrations; the lowest concentration that can be reliably detected is known as the detection limit. Non-detectable concentrations are between zero and the detection limit.
[b]**Bold** typeface indicates the FRL was exceeded.
[c]The FRL of 0.022 mg/L is for chromium VI, but due to holding time considerations, total chromium is analyzed. Studies at the FEMP have concluded that chromium VI is not present in the aquifer and Eh-pH conditions measured in the aquifer are not oxidizing enough to support the presence of chromium VI. Therefore, the total chromium concentrations being measured and reported in reference to the 0.022 mg/L FRL must be due to chromium III, not chromium VI.
[d]The FRLs for fluoride and lead were changed and documented in the Operable Unit 5 Record of Decision by change pages.
[e]The FRL of 11 mg/L is for nitrate, but because of holding time considerations, nitrate/nitrite is analyzed. This is acceptable because nitrate/nitrite provides a more conservative result.